

Notice of Allowability

Application No.

09/902,818

Examiner

Chih-Ching Chow

Applicant(s)

RINGSETH ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/26/05.
2. ☒ The allowed claim(s) is/are 23-32 (now numbered as 1-10).
3. ☒ The drawings filed on 7/20/05 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 06/27/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


TUAN DAM
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

1. This action is responsive to Applicant's amendment, after non-final Office Action, filed on May 26, 2005.

Examiner's Amendment

2. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this Examiner's amendment was given in a telephone interview with Mr. Jeremiah J. Baunach, Registration Number 44,527, on June 27, 2005, for obviating any potential 101 issues and put the claims in condition for allowance.

4. The application has been amended as follows:

23. (currently amended) A computer storage medium having instructions thereon for performing a method of compiling programming language code with a compiler, comprising:

initially parsing the code;

during said initial parsing, encountering an attribute block and allowing an interface definition that follows the attribute block to include embedded information; and

parsing the interface definition wherein when the compiler encounters a soap-handler attribute, the compiler recognizes soap-handler as an attribute that is supported by an attribute provider and calls into the attribute provider.

24. (currently amended) A ~~method~~ computer storage medium according to claim 23, wherein the attribute provider marks the class on which the soap-handler attribute appears ms handling (Simple Object Access Protocol) SOAP messages and then the attribute provider returns control to the compiler.

25. (currently amended) A ~~method~~ computer storage medium according to claim 24, wherein after said return of control, the compiler begins parsing the body of the class on which the soap-handler attribute appears and parses each function in the class.

26. (currently amended) A ~~method~~ computer storage medium according to 25, wherein for each soap-header attribute on the function, the compiler performs soap-header attribute processing.

27. (currently amended) A ~~method~~ computer storage medium according to claim 26, wherein said soap-header attribute processing includes recognizing a soap-header attribute ms an attribute that is supported by the attribute provider and calling into the attribute provider whereby the attribute provider (i) gathers information to create the "Header" part of a SOAP message, (ii) queries the compiler for information about the parameters to the soap-header attribute and (iii) queries the compiler for information about the data type for the header.

28. (currently amended) A ~~method~~ computer storage medium according to claim 26, wherein said soap-header attribute processing includes generating the information for creating a portion of the (Simple Object Access Protocol) SOAP message header and returning control from the attribute provider to the compiler.

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29. (currently amended) A ~~method~~ computer storage medium according to 25, wherein if the function has a soap-method attribute, the compiler performs soap-method attribute processing.

30. (currently amended) A ~~method~~ computer storage medium according to claim 29, wherein said soap-method attribute processing includes recognizing a soap-method attribute as an attribute that is supported by the attribute provider and calls into the attribute provider whereby the attribute provider (i) gathers information to create a (Simple Object Access Protocol) SOAP message for the function and (ii) queries the compiler for information about the parameters to the function on which soap-method attribute appears.

31. (currently amended) A ~~method~~ computer storage medium according to claim 30, wherein for each parameter on the function, the attribute provider (i) uses the interface definition information to determine which function parameters are to be received as part of the incoming SOAP message, and which parameters are to be sent back as part of the SOAP message response and (ii) queries the compiler about the data type of the parameter.

32. (currently amended) A ~~method~~ computer storage medium according to claim 29, wherein said soap-method attribute processing includes generating the data to create the SOAP message portion for a parameter and returning control from the attribute provider to the compiler.

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Examiner's Statement of Reason(s) for Allowance

5. Claims 23-32 are allowed.

6. The following is an examiner's statement of reasons for allowance:

The prior arts of record: Bau, teaches an annotation based development platform for stateful web services. At compile time, an enhanced compiler analyzes the annotated source file and automatically generates the mechanisms required to expose its

functionality as a stateful web services. Mein teaches a SOAP (Simple Object Access Protocol), which is an application layer protocol, a protocol capable of accessing and invoking methods in Automation objects across the Internet and through firewalls.

However, none of them, taken alone or in combination, teaches the feature of a compiler which, recognizes a declarative syntax for SOAP-based web services; **when parsing code encountering an attribute block**, allowing an interface definition that follows the attribute block, **parsing the interface definition wherein when encounters a soap_handler attribute**, the compiler recognizes soap-handler attribute as an **attribute that is supported by an attribute provider and calls into the attribute provider**, and in such a manner as recited in the independent claim 23.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Ching Chow whose telephone number is 571-272-3693. The examiner can normally be reached on 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Ching Chow
Examiner
Art Unit 2192
June 28, 2005

CC



TUAN DAM
SUPERVISORY PATENT EXAMINER